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EXAMINER

BULLOCK JR, LEWIS ALEXANDER

ART UNIT PAPER NUMBER

2126

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Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

09/768,098

Applicant(s)

GOLDS ET AL.

Examiner

Lewis A. Bullock, Jr.

Art Unit

2126

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 January 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 11-13, 15-18 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by NAKATA (U.S. Patent 5,870,756).

As to claim 11, NAKATA teaches in a computer system (col. 4, line 13-14), a mechanism comprising: a plurality of software modules (data drivers), each software module (data driver) having an assigned value (start sector) indicative of a relative order (see fig. 30); and an ordering mechanism (processor functionality for loading files and drivers to process data command) configured to evaluate each value (start sector) and to arrange the software modules (data drivers) for execution in a relative order determined by the assigned values (via loading and invoking the drivers at the assigned start position that were disclosed by the user data control data) (col. 22, line 5 – col. 23, line 57).

As to claim 12, NAKATA teaches the ordering mechanism (processor) arranges the software modules (data driver) by attaching them in a stacked configuration (data structure of interchangeable storage medium) (col. 5, line 51 – col. 6, line 14).

As to claim 13, NAKATA teaches the software modules comprise filter drivers (data drivers) (col. 22, line 5 – col. 23, line 57).

As to claim 15, NAKATA teaches an operating system for passing file system requests (data file commands) to the filter drivers (data drivers) (col. 6, lines 15-41).

As to claim 16, NAKATA teaches the software modules comprise filter drivers (data drivers) (col. 22, line 5 – col. 23, line 57), and a filter manager (CPU), the filter manager including the ordering mechanism and further configured to call the filter drivers (data drivers) in the relative order determined by the assigned values (col. 22, line 5 – col. 23, line 57).

As to claim 17, NAKATA teaches the filter manager (CPU) calls the filter drivers (data drivers) to handle a file system requests (data file commands) (col. 22, line 5 – col. 23, line 57).

As to claim 18, NAKATA teaches the filter manager (CPU) is configured to evaluate criteria (extension / operating system identifiers) associated with the file system request (read / write request for a data file) prior to calling the filter drivers (data drivers) for execution in the relative order (col. 10, line 5 – col. 11, line 24; col. 11, line 65 - col. 12, line 67; see figs. 6 and 8).

As to claim 20, NAKATA teaches each assigned value (start sector) is unique to a particular software module (data driver) (via indicating the starting position of different data drivers) (col. 5, line 66 – col. 6, line 14; see also figs. 6 and 8).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-3, 5-10, 19 and 21-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over NAKATA (U.S. Patent 5,870,756).

As to claim 1, NAKATA teaches in a computer system (col. 4, line 13-14), a method comprising: maintaining assigned values (start sector) in association with software modules (data drivers) (via data driver control data), each software module (data drivers) having an assigned value (start sector), the assigned values having a relative order (see fig. 30); and executing the software modules (data drivers) in an order (via loading and executing the associated drivers disclosed in the user data control data) determined by each of the assigned values (via loading and invoking the drivers at the assigned start position that were disclosed by the user data control data) (col. 22, line 5 – col. 23, line 57). However, NAKATA does not explicitly mention having unassigned values between any two assigned values of software modules. NAKATA implicitly teaches that data files and data drivers are stored and accessed based on

start positions and wherein the data files have start positions wherein between two assigned values there exists some unassigned values (see fig. 27, wherein there is no 12-14 between values 11 and 15). Therefore, it would be obvious to one skilled in the art at the time of the invention that since the drivers are also assigned start sectors that they also have unassigned values between any assigned values, similar to the data files.

As to claims 21, NAKATA teaches a computer-readable medium having computer-executable instructions, comprising: maintaining assigned values (start sector) in association with filter drivers (data drivers), each filter driver (data driver) having an assigned value (start sector), the assigned values having a relative order (see fig. 30); and executing the filter drivers (data drivers) in an order determined by each of the assigned values (via loading and invoking the drivers at the assigned start position that were disclosed by the user data control data) (col. 22, line 5 – col. 23, line 57). However, NAKATA does not explicitly mention having unassigned values between any two assigned values of software modules. NAKATA implicitly teaches that data files and data drivers are stored and accessed based on start positions and wherein the data files have start positions wherein between two assigned values there exists some unassigned values (see fig. 27, wherein there is no 12-14 between values 11 and 15). NAKATA also teaches that data files and data drivers are stored and accessed based on start positions and wherein the data files have start positions wherein between two assigned values there exists some unassigned values (see fig. 27, wherein there is no

12-14 between values 11 and 15). Therefore, it would be obvious to one skilled in the art at the time of the invention that since the drivers are also assigned start sectors that they also have unassigned values between any assigned values, similar to the data files.

As to claims 24 and 25, NAKATA teaches a method comprising: classifying software modules (data drivers) into groups based on types (extensions / operating system) thereof; assigning each software module (data driver) a value (start sector) based on its group, each assigned value (start sector) having a relative order; and maintaining an association between each software module (data driver) and its assigned value (start sector) (via the data driver control data) (col. 10, line 5 – col. 11, line 24; col. 11, line 65 - col. 12, line 67; see figs. 6 and 8). However, NAKATA does not explicitly mention having unassigned values between any two assigned values of software modules. NAKATA implicitly teaches that data files and data drivers are stored and accessed based on start positions and wherein the data files have start positions wherein between two assigned values there exists some unassigned values (see fig. 27, wherein there is no 12-14 between values 11 and 15). NAKATA also teaches that data files and data drivers are stored and accessed based on start positions and wherein the data files have start positions wherein between two assigned values there exists some unassigned values (see fig. 27, wherein there is no 12-14 between values 11 and 15). Therefore, it would be obvious to one skilled in the art at the time of the

invention that since the drivers are also assigned start sectors that they also have unassigned values between any assigned values, similar to the data files.

As to claim 2, NAKATA teaches executing the software modules comprises calling the software module (in order to process the data file) (col. 23, line 41-44; col. 4, lines 38-63).

As to claim 3, NAKATA teaches the software modules comprise filter drivers (data drivers), and wherein calling the software modules includes passing file system requests (processing / executing of a data file) thereto (col. 22, line 5 – col. 23, line 57).

As to claim 5, NAKATA teaches the software modules (data drivers) are attached in a stack (data storage structure / interchangeable storage medium) (see fig. 30) (col. 22, lines 16-26).

As to claim 6, NAKATA teaches executing the software modules (data drivers) in an order determined by each of the assigned values (start sector) includes maintaining an order (via loading and invoking the drivers at the assigned start position that were disclosed by the user data control data) (col. 22, line 5 – col. 23, line 57).

As to claim 7, NAKATA teaches evaluating criteria (extension / operating system) associated with the software modules (data drivers), and wherein executing the

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software modules (data drivers) comprises selecting only software module (data driver) that meet the criteria (extension / operating system) for execution (col. 10, line 5 – col. 11, line 24; col. 11, line 65 - col. 12, line 67; see figs. 6 and 8).

As to claim 8, NAKATA teaches the software modules comprise filter drivers (data drivers) and wherein evaluating criteria (extension / operating system) associated with the software modules (data drivers) comprises evaluating a file system request (read / write request for a data file) (col. 10, line 5 – col. 11, line 24; col. 11, line 65 - col. 12, line 67; see figs. 6 and 8).

As to claim 9, NAKATA teaches assigning an assigned value (start sector) to a software module (data driver) (via a processor writing a processing program into the interchangeable storage medium) (col. 4, lines 51 – col. 5, line 32; col. 5, line 35 – col. 6, line 14).

As to claim 10, NAKATA teaches classifying a software module (data driver) based on a type (extension / operating system) thereof; and wherein the assigned value (start sector) corresponds to the type (via the data driver control data) col. 10, line 5 – col. 11, line 24; col. 11, line 65 - col. 12, line 67; see figs. 6 and 8).

As to claim 19, NAKATA does not explicitly mention having unassigned values between any two assigned values of software modules. NAKATA implicitly teaches that

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data files and data drivers are stored and accessed based on start positions and wherein the data files have start positions wherein between two assigned values there exists some unassigned values (see fig. 27, wherein there is no 12-14 between values 11 and 15). Therefore, it would be obvious to one skilled in the art at the time of the invention that since the drivers are also assigned start sectors that they also have unassigned values between any assigned values, similar to the data files.

As to claim 22, NAKATA teaches executing the filter drivers (data driver) in an order determined by each of the assigned values (via loading and invoking the drivers at the assigned start position that were disclosed by the user data control data) (col. 22, line 5 – col. 23, line 57) includes attaching the filter drivers (data driver) in a stack (data structure of interchangeable storage medium) (col. 5, line 51 – col. 6, line 14), and passing file system requests (read / write request for a data file) thereto (col. 6, lines 15-41; col. 22, line 5 – col. 23, line 57).

As to claim 23, NAKATA teaches executing the filter drivers (data drivers) in an order determined by each of the assigned values (via loading and invoking the drivers at the assigned start position that were disclosed by the user data control data) (col. 22, line 5 – col. 23, line 57) includes calling the filter drivers (data drivers) in the order determined by each of the assigned values to pass file system requests (read / write request for a data file) thereto (via loading and invoking the drivers at the assigned start

position that were disclosed by the user data control data) (col. 6, lines 15-41; col. 22, line 5 – col. 23, line 57).

5. Claims 4 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over NAKATA (U.S. Patent 5,870,756) in view of CABRERA (U.S. Patent 5,978,815).

As to claim 4, NAKATA substantially discloses the invention. However, NAKATA does not teach the file system requests are package as input-output request packets to be processed by a hierarchy of drivers. CABRARA teaches the file system requests comprise input-output request packets to be processed by a hierarchy of software drivers (layered drivers) (col. 3, lines 16-22; col. 3, lines 52-67; col. 16, lines 23-53). Therefore, it would be obvious to one skilled in the art to combine the teachings of NAKATA with the teachings of CABRERA in order to facilitate the processing of I/O requests without greatly increasing the processing overhead (col. 5, lines 1-20).

As to claim 14, NAKATA substantially discloses the invention. However, NAKATA does not teach the file system requests are package as input-output request packets to be processed by a hierarchy of drivers. CABRARA teaches the file system requests comprise input-output request packets to be processed by a hierarchy of software drivers (layered drivers) (col. 3, lines 16-22; col. 3, lines 52-67; col. 16, lines 23-53). Therefore, it would be obvious to one skilled in the art to combine the teachings of NAKATA with the teachings of CABRERA in order to facilitate the processing of I/O requests without greatly increasing the processing overhead (col. 5, lines 1-20).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lewis A. Bullock, Jr. whose telephone number is (703) 305-0439. The examiner can normally be reached on Monday-Friday, 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng An can be reached on (703) 305-9678. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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